

Reviewed for Code Compliance

08/11/2023

CIMARRON ENGINEERING

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JONATHAN BATSON, P.E. 970-318-6026  
PO BOX 1421  
RIDGWAY CO, 81432

UHL MONITOR BARN OWTS  
COUNTY RD 68  
ROUTT COUNTY, CO

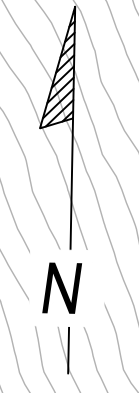
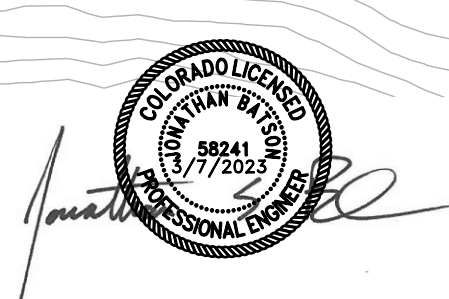
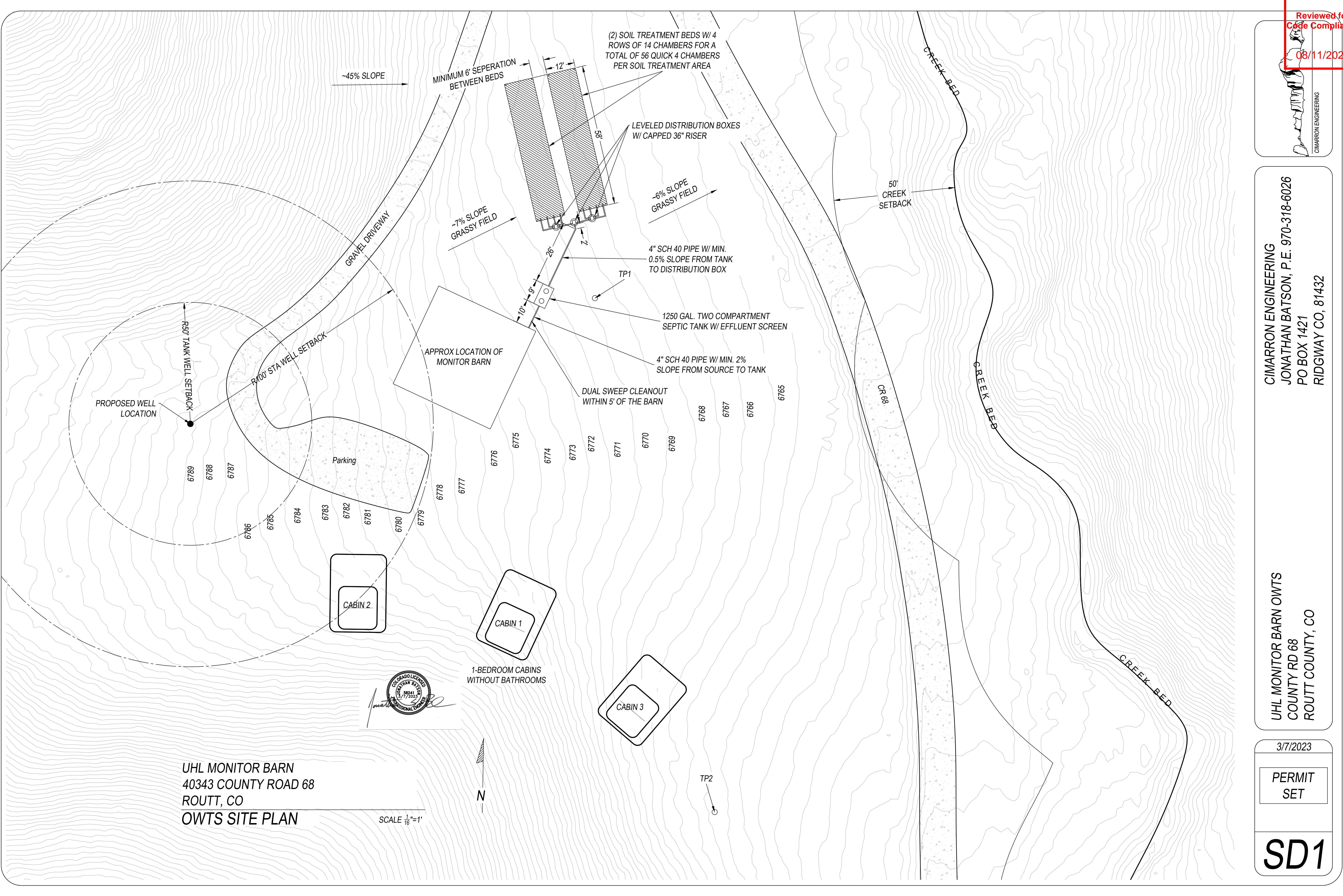
3/7/2023

PERMIT SET

SD1

UHL MONITOR BARN  
40343 COUNTY ROAD 68  
ROUTT, CO  
OWTS SITE PLAN

SCALE 1/8"=1'



**ON-SITE WASTEWATER TREATMENT SYSTEM (OWTS) GENERAL NOTES**

IN THE EVENT QUESTIONS ARISE DURING CONSTRUCTION AND THE ANSWERS ARE NOT SPECIFICALLY STATED WITHIN THE OWTS DESIGN OUTLINED WITHIN THESE DRAWINGS CIMARRON ENGINEERING, LLC SHALL BE CONTACTED WITH A REQUEST FOR INFORMATION. THE ENGINEER AND COUNTY IS TO BE NOTIFIED, A MINIMUM OF 72 HOURS IN ADVANCE, FOR (1) INSPECTION PRIOR TO COVERING THE OWTS COMPONENTS. SETBACKS SHALL BE FOLLOWED PER THE SUMMARY TABLE INCLUDED WITH THIS DESIGN. THE OWTS DESIGN MUST MEET ALL REQUIREMENTS OF THE LATEST VERSION OF THE COLORADO STATE REGULATION NO. 43 - ON-SITE WASTEWATER TREATMENT SYSTEM REGULATION AS WELL AS ALL APPLICABLE COUNTY AND LOCAL REQUIREMENTS. IT IS THE RESPONSIBILITY OF THE HOME OWNER TO PROVIDE MAINTENANCE AND CLEANING OF THE OWTS COMPONENTS AS NEEDED. IT IS RECOMMENDED THAT THE OWNER OF THE SEPTIC SYSTEM USE A SERVICE PROVIDER TO PROVIDE MAINTENANCE TO THE SEPTIC SYSTEM BASED ON THE COMPONENTS OF THE SYSTEM. IF THE OWNER CHOOSES TO MAINTAIN THE SEPTIC SYSTEM IT IS RECOMMENDED THAT THE OWNER USE THE TOOLS PROVIDED AT THE FOLLOWING WEBSITE: WWW.H2OANDM.COM EXCAVATOR IS RESPONSIBLE FOR THE APPROPRIATE LOCATES PRIOR TO INSTALLING THE OWTS SYSTEM. THE OWNER IS RESPONSIBLE FOR VERIFYING THAT THE ELECTRICAL INFRASTRUCTURE IS CAPABLE OF HANDLING THE DESIGN COMPONENTS OF THE OWTS. IT IS THE RESPONSIBILITY OF THE OWNER TO ENSURE THE EFFLUENT TO THE OWTS IS OF NORMAL RESIDENTIAL STRENGTH AND DOES NOT CONTAIN HARSH CHEMICALS OR EXCESSIVE SEDIMENTS THAT WOULD KILL THE MICROBES OR CLOG THE COMPONENTS OF THE OWTS. IT IS THE RESPONSIBILITY OF THE OWNER TO ENSURE THE COMPONENTS OF THE OWTS ARE PROTECTED FROM VEHICULAR TRAFFIC THAT COULD POSSIBLY DAMAGE THE COMPONENTS OF THE OWTS.

**SEPTIC TANK GENERAL NOTES**

THE SEPTIC TANK SHALL BE A TWO COMPARTMENT TANK MANUFACTURED BY A COLORADO DEPARTMENT OF HEALTH CERTIFIED MANUFACTURER. THE TANK SHALL BE MANUFACTURED, INSPECTED AND TESTED IN ACCORDANCE WITH COLORADO REGULATION 43 SECTION 43.9. ACCEPTED SEPTIC TANK MANUFACTURERS CAN BE REVIEWED AT THE FOLLOWING CDHPE WEBSITE: <https://cdhpe.colorado.gov/septicapproval>. THE TANK SHALL HAVE AT LEAST ONE SEALED WATERTIGHT RISER ACCESS OPENING NO LESS THAN 20 INCHES ACROSS FOR EACH COMPARTMENT OF THE TANK. A VISUAL INSPECTION IS TO BE COMPLETED ON THE TANK PRIOR TO BACKFILLING. THE TANK SHALL BE PERMANENTLY AND LEGIBLY MARKED, AT A MINIMUM, WITH THE FOLLOWING:  
 - NAME OF MANUFACTURER  
 - MODEL OR SERIAL NUMBER, IF AVAILABLE  
 - EFFECTIVE VOLUME AND UNIT OF MEASURE  
 - MAXIMUM DEPTH OF COVER AND EXTERNAL LOADS THE TANK IS DESIGNED TO RESIST  
 - INLET AND OUTLET IDENTIFICATIONS

**PIPING GENERAL NOTES**

ALL SYSTEM PIPING, EXCEPT FOR DISTRIBUTION LATERALS WITHIN A STA, SHALL BE BEDDED WITH LOOSE PEA GRAVEL FREE OF STONES, SHARP ROCKS, FROZEN SOIL OR OTHER DELETERIOUS MATERIAL AND MECHANICALLY COMPACTED TO SUPPORT THE PIPE. SCHEDULE 40 OR PIPE OF EQUIVALENT OR GREATER STRENGTH SHALL BE USED FOR THE PLACEMENT OF PIPING UNDER DRIVEWAYS OR ROADWAYS AND IN INSTANCES WHERE SEWER LINE SETBACK DISTANCES ARE GRANTED A VARIANCE FOR ANY REASON. PERFORATED NON-PRESSURIZED PIPING WITHIN THE STA BED/TRENCH SHALL HAVE THE PERFORATIONS FACE DOWNWARD AT APPROXIMATELY THE 4 O'CLOCK AND 8 O'CLOCK POSITIONS. ALL PRESSURIZED LATERALS WITHIN THE STA SHALL HAVE A FLUSHING ASSEMBLY AT THE DISTAL END OF THE PIPE THAT IS ACCESSIBLE FROM GRADE WITH THE FOLLOWING COMPONENTS: 90 DEGREE SWEEP, BLOCK VALVE AND CAP.

**SOIL TREATMENT AREA (STA) GENERAL NOTES**

THE INFILTRATIVE SURFACE, DISTRIBUTION BOX AND DISTRIBUTION LATERALS MUST BE LEVEL. A FINAL COVER OF SOIL SUITABLE FOR VEGETATION AT LEAST TEN INCHES DEEP MUST BE PLACED FROM THE TOP OF THE GEOTEXTILE OR SIMILAR PERVIOUS MATERIAL IN A ROCK AND PIPE SYSTEM, CHAMBER, OR MANUFACTURED MEDIA UP TO THE FINAL SURFACE GRADE OF THE SOIL TREATMENT AREA. FOLLOWING CONSTRUCTION, THE GROUND SURFACE MUST BE GRADED TO DIVERT STORMWATER RUNOFF OR OTHER OUTSIDE WATER FROM THE SOIL TREATMENT AREA. THE AREA MUST BE PROTECTED AGAINST EROSION. BACKFILLING AND COMPACTION OF SOIL TREATMENT AREAS MUST BE ACCOMPLISHED IN A MANNER THAT DOES NOT IMPAIR THE INTENDED FUNCTION AND PERFORMANCE OF THE STORAGE/DISTRIBUTION MEDIA AND SOIL AND DISTRIBUTION LATERALS. ALLOWS FOR THE ESTABLISHMENT OF VEGETATIVE COVER, MINIMIZES SETTLEMENT AND MAINTAINS PROPER POROSITY OF THE SOIL TO PROMOTE PROPER EFFLUENT INFILTRATION. AT LEAST 6 INCHES OF GRAVEL, ROCK OR OTHER MATERIAL MUST BE PLACED BELOW THE PIPE. THE GRAVEL, ROCK OR OTHER MATERIAL MUST FILL AROUND THE PIPE AND BE AT LEAST 2 INCHES ABOVE THE TOP OF THE DISTRIBUTION PIPE. THE STA MUST BE PROTECTED FROM VEHICULAR AND PEDESTRIAN TRAVEL. PRIOR TO AND DURING CONSTRUCTION, THE PROPOSED SOIL TREATMENT AREA AND REPLACEMENT AREA, IF ANY, MUST BE PROTECTED FROM DISTURBANCE, COMPACTION, OR OTHER DAMAGE BY MEANS OF STAKING, FENCING, POSTING, OR OTHER EFFECTIVE METHODS.

**ABSORPTION BEDS**

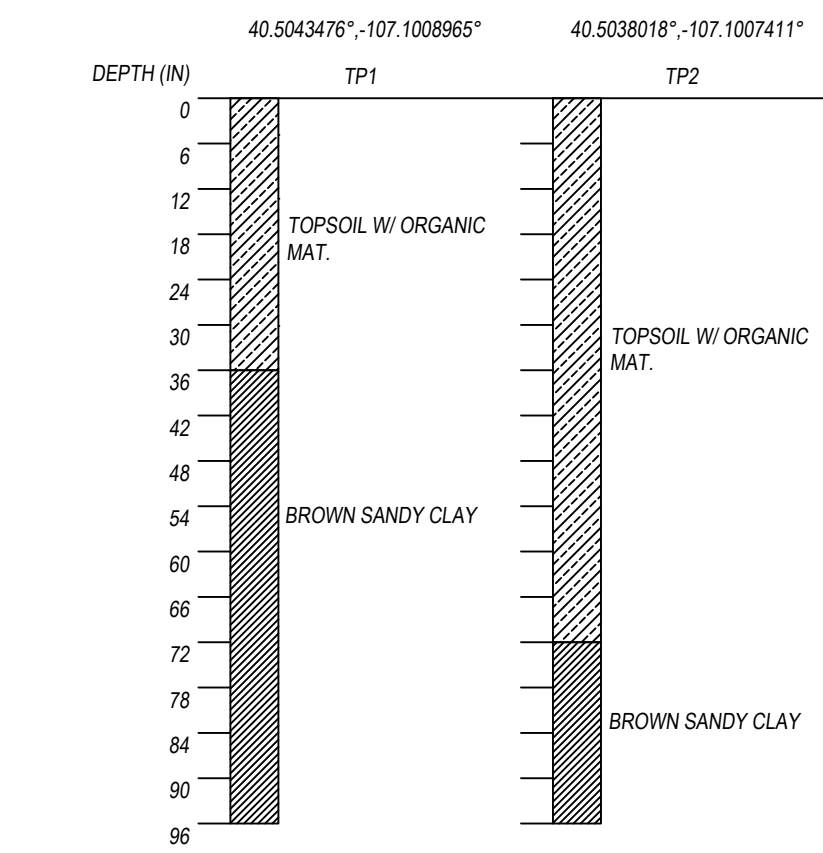
- GRAVITY FED DISTRIBUTION SYSTEM: THE SEPARATING DISTANCE BETWEEN PARALLEL GRAVITY DISTRIBUTION LATERALS MUST NOT EXCEED 6 FEET (CENTER-TO-CENTER), AND A DISTRIBUTION LATERAL MUST BE LOCATED WITHIN 3 FEET OF EACH SIDEWALL AND ENDWALL.
- PRESSURIZED DISTRIBUTION SYSTEM: THE SEPARATING DISTANCE BETWEEN PARALLEL GRAVITY DISTRIBUTION LATERALS MUST NOT EXCEED 4 FEET (CENTER-TO-CENTER), AND A DISTRIBUTION LATERAL MUST BE LOCATED WITHIN 2 FEET OF EACH SIDEWALL AND ENDWALL.
- THE SEPARATING DISTANCE BETWEEN BEDS MUST BE A MINIMUM OF SIX FEET SIDEWALL-TO-SIDEWALL.

**TRENCHES**

- MUST BE 3 FEET WIDE OR LESS
- SEPARATING DISTANCE BETWEEN TRENCHES MUST BE A MINIMUM OF 4 FEET SIDEWALL TO SIDEWALL

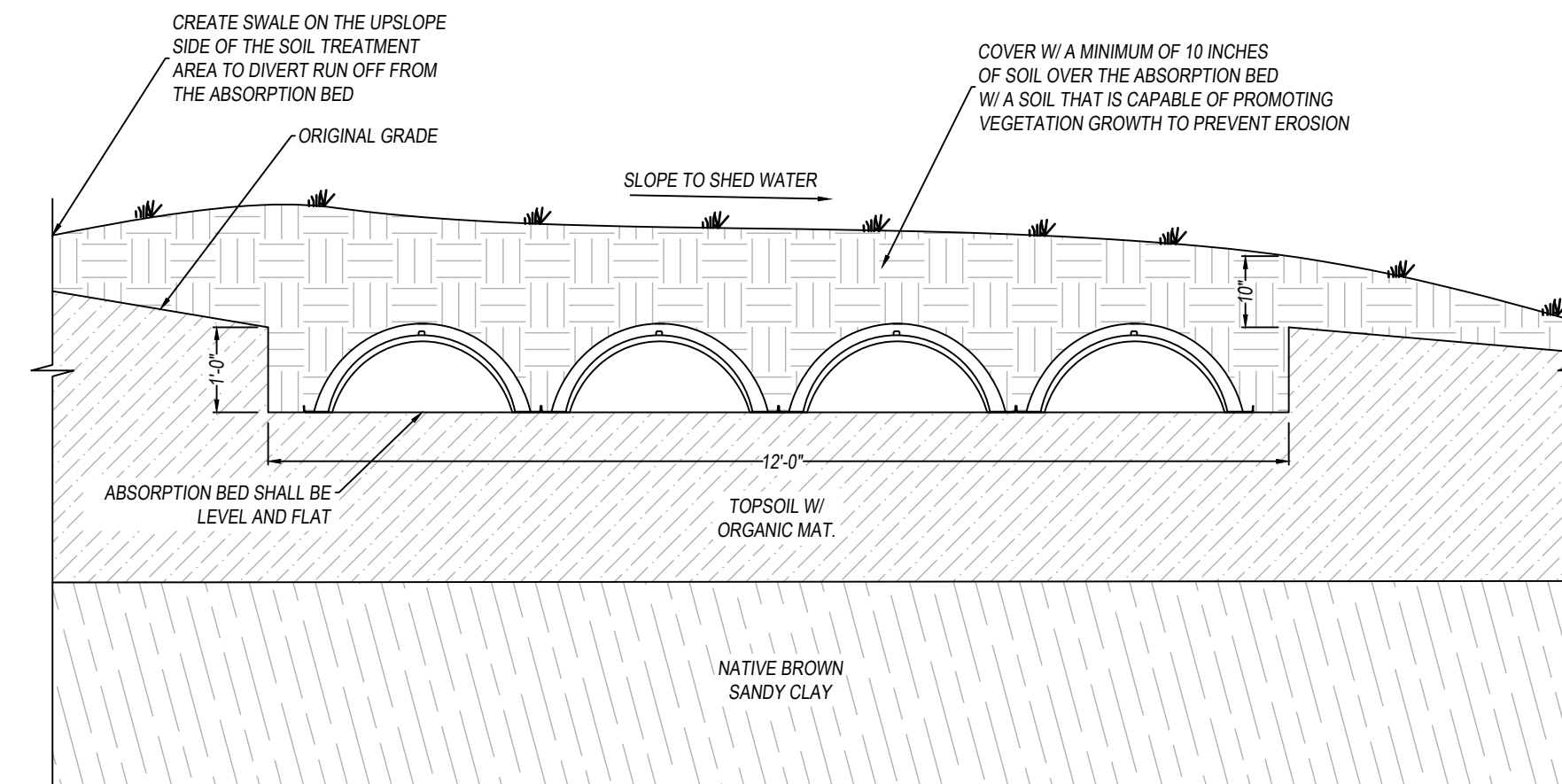
SETBACK DESCRIPTION	MINIMUM HORIZONTAL DISTANCES IN FEET BETWEEN COMPONENTS OF THE OWTS		
	SEPTIC/DOSING TANK	SEWER/EFFLUENT LINES	STA BED/TRENCH
SPRING, WELL, SUCTION LINE, POTABLE WATER SUPPLY CISTERN	50	50	100
POTABLE WATER SUPPLY LINE	10	5	25
STRUCTURE W/BASEMENT, CRAWL SPACE OR FOOTING DRAINS	5	0	20
STRUCTURE WITHOUT BASEMENT, CRAWL SPACE OR FOOTING DRAINS	5	0	10
PROPERTY LINES, PIPED OR LINED IRRIGATION DITCH, UPSLOPE CURTAIN DRAIN	10	10	10
SUBSURFACE DRAIN, INTERMITTENT IRRIGATION LATERAL, DRYWELL, STORMWATER STRUCTURE	10	10	25
LAKE, WATER COURSE, IRRIGATION DITCH, STREAM, WETLAND	50	50	50
DRY GULCH, CUT BANK, FILL AREA (FROM CREST)	10	10	25
SEPTIC TANK, HIGHER LEVEL TREATMENT UNIT, DOSING TANK, VAULT OR PRIVY	--	--	5

**SOIL LOG**

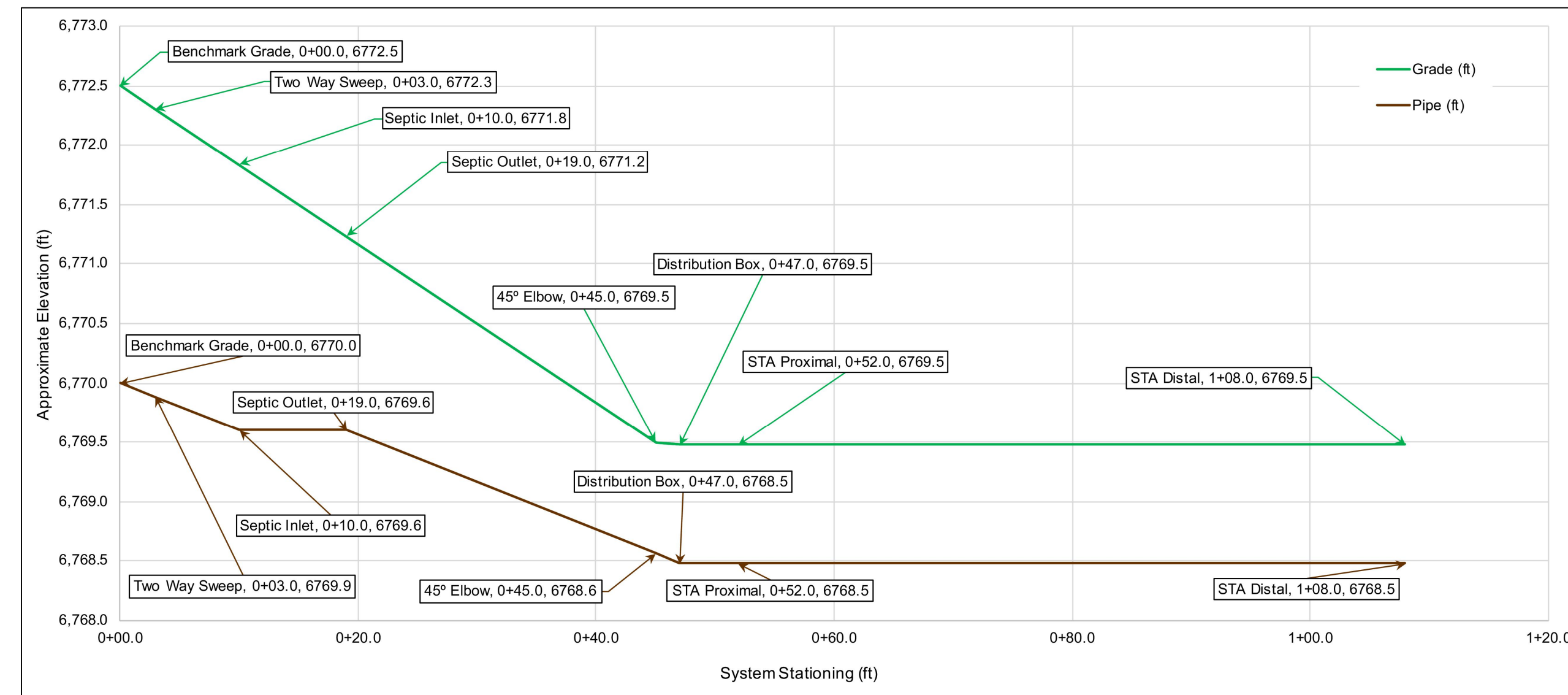


**DESIGN CALCULATIONS**

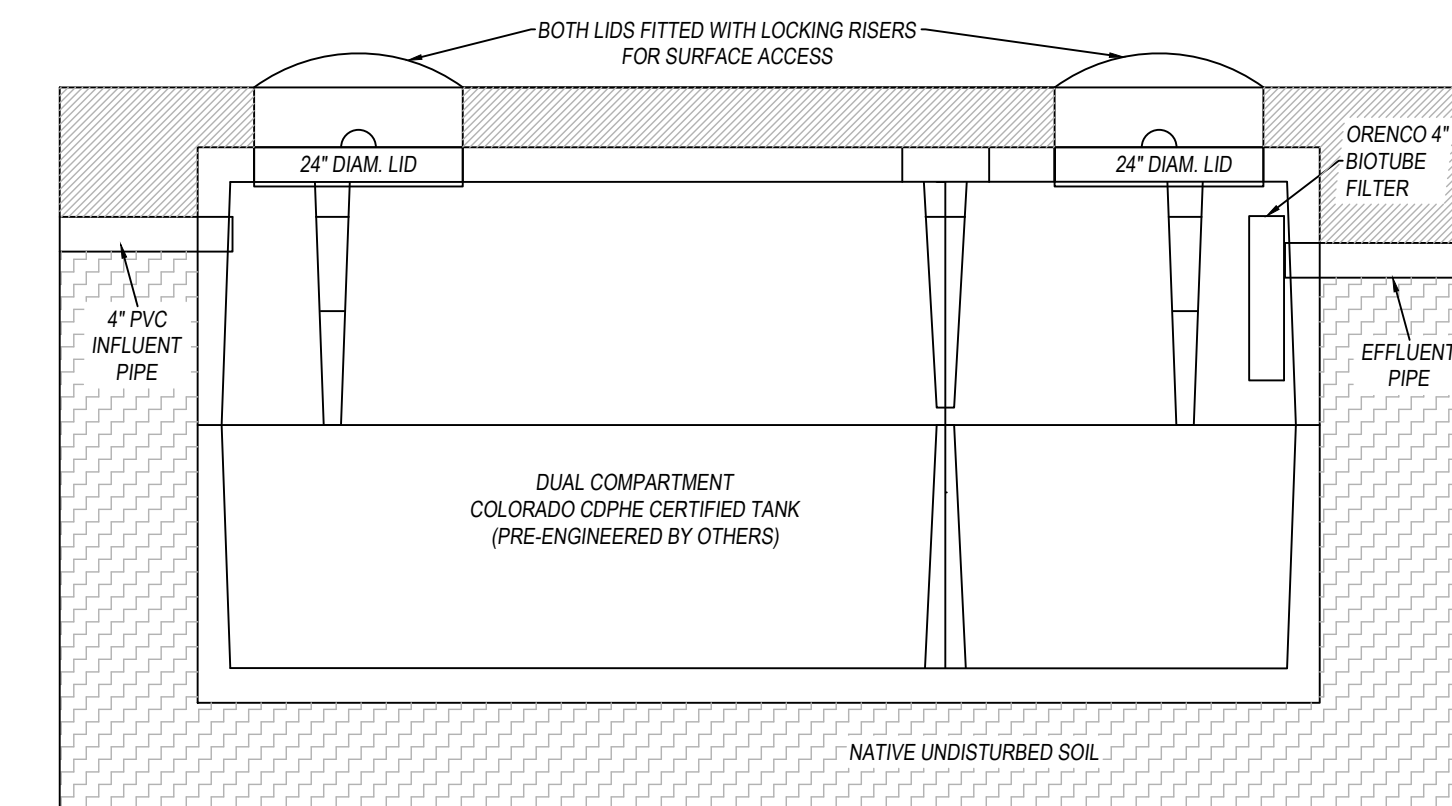
BEDROOMS	3
ADDITIONAL FLOW (GPD)	0
DESIGN FLOW (GPD)	450
TANK VOLUME (GAL)	1250
SOIL TYPE	3A
LTAR (GPD/FT <sup>2</sup> )	0.3
APPLICATION METHOD	GRAVITY
APPLICATION FACTOR	1.2
MEDIA FACTOR	0.7
AREA REQUIRED (FT <sup>2</sup> )	1,260



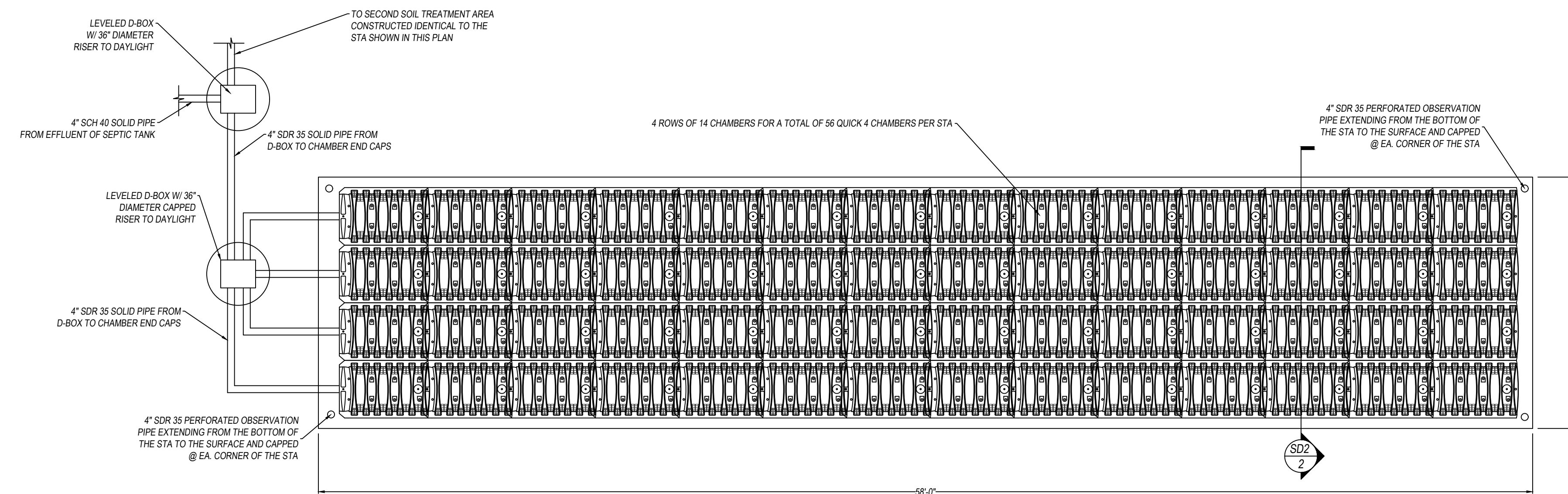
**SD2 2** DETAIL - SOIL TREATMENT AREA SCALE 1/2"=1'



**SD2 1** SYSTEM ELEVATION PROFILE NTS



**SD2 3** DUAL COMPARTMENT SEPTIC TANK NTS



**PLAN - SOIL TREATMENT AREA** SCALE 1/4"=1'

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**SD2**

